

WHAT IS CLAIMED IS:

1. A digital signal processing apparatus connected to other digital signal processing apparatuses by means of a digital signal bus to transmit/receive a digital signal, wherein said digital signal processing apparatus comprises an interface circuit so that when said digital signal processing apparatus is powered on, said interface circuit performs authentication between said digital signal processing apparatus and any of said other digital signal processing apparatuses powered on simultaneously with or before power-on of said digital signal processing apparatus.

2. A digital signal processing apparatus connected to other digital signal processing apparatuses by means of a digital signal bus to transmit/receive a digital signal, wherein said digital signal processing apparatus comprises an interface circuit so that when powering-on of said other digital signal processing apparatuses is detected, said interface circuit performs authentication between said digital signal processing apparatus and any of said other digital signal processing apparatuses.

3. A digital signal processing apparatus connected to other digital signal processing apparatuses by means of a digital signal bus to transmit/receive a digital signal, wherein said digital signal processing apparatus comprises an interface circuit which performs authentication between said digital signal processing

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apparatus and said other digital signal processing apparatuses when said interface circuit is connected to said digital signal bus.

4. A digital signal processing apparatus connected to other digital signal processing apparatuses by means of a digital signal bus to transmit/receive a digital signal, wherein said digital signal processing apparatus comprises an interface circuit which performs authentication between said digital signal processing apparatus and said other digital signal processing apparatuses when connection of said other digital signal processing apparatuses to said digital signal bus is detected.

5. A digital signal processing apparatus provided with a plurality of input terminals including an input terminal from a digital signal bus and connected to other digital signal processing apparatuses by means of said digital signal bus to transmit/receive a digital signal, wherein said digital signal processing apparatus comprises:

a switching circuit for selecting said plurality of input terminals; and

an interface circuit which performs authentication between said digital signal processing apparatus and said other digital signal processing apparatuses when said input terminal connected to said digital signal bus is selected by said switching circuit.

6. A digital signal processing apparatus connected to other digital signal processing apparatuses by means of a digital signal bus to encrypt a digital signal and transmit/receive said encrypted digital signal, wherein said digital signal processing apparatus comprises:

an interface circuit which performs authentication between said digital signal processing apparatus and said other digital signal processing apparatuses; and

a storage circuit for storing a key used to decrypt said encrypted digital signal which is subjected to transmission/reception of between said digital signal processing apparatus and each of said other digital signal processing apparatuses.

7. A digital signal processing apparatus connected to other digital signal processing apparatuses by means of a digital signal bus having a plurality of transmission channels to thereby encrypt a digital signal in accordance with copyright control information of said digital signal and perform transmission/reception of said encrypted digital signal, wherein said digital signal processing apparatus comprises an interface circuit which changes said transmission channels of said digital signal bus in accordance with said copyright control information when said digital signal is to be transmitted.

8. A digital signal processing apparatus

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connected to other digital signal processing apparatuses by means of a digital signal bus to exchange a digital signal, wherein said digital signal processing apparatus comprises a circuit for defining a name of said digital signal processing apparatus and names of said other digital signal processing apparatuses connected to said digital signal bus.